

In the Claims

1-9. (cancelled)

10. (currently amended) A process for producing adhesion elements on a substrate, comprising the steps of:

introducing thixotropic plastic material of polyvinyl siloxane having a contact angle greater than 60 degrees due to surface energy for wetting with water into mold cavities in at least one shaping element, each of the mold cavities having a circumferential boundary wall extending in a lengthwise direction thereof continuously along a convex path, each convex path having a curvature with ~~increaseddecreased~~ radii of curvature adjacent an inner end and ~~decreasedincreased~~ radii of curvature adjacent an outer end; and

forming the plastic material into at least 16,000 adhesion elements with flared ends per cm^2 accomplishing adhesion predominantly by van-der-Waals forces at the inner ends of the mold cavities, the flared ends forming heads with essentially flat end surfaces, the adhesion elements having stem parts with ends being formed at the outer ends of the mold cavities and being opposite the flared ends, with a height from 50 μm to 150 μm and with a diameter from 10 μm to 40 μm , the flared ends having a diameter from 15 μm to 70 μm .

11-13. (cancelled)

14. (previously presented) A process according to claim 10 wherein the shaping element is a drum-shaped screen having at least 16,000 mold cavities per cm^2 .

15. (cancelled)

16. (previously presented) A process according to claim 14 wherein each of the mold cavities has a hyperboloid shape.

17. (cancelled)

18. (previously presented) A process according to claim 10 wherein the contact angle is greater than 70 degrees.

19. (cancelled)

20. (previously presented) A process according to claim 10 wherein the height of the stems is approximately 90 μm ;
the diameter of the stems is approximately 30 μm ; and
the diameter of the flared end is approximately 50 μm .

21. (previously presented) A process according to claim 10 wherein the plastic material is cross-linked with or after molding of the adhesion elements.

22. (currently amended) A process for producing adhesion elements on a substrate, comprising the steps of:

introducing thixotropic plastic material of polyvinyl siloxane having a contact angle greater than 60 degrees due to surface energy for wetting with water into the mold cavities in at least one shaping element, each of the mold cavities having a circumferential boundary wall extending in a lengthwise direction thereof continuously along a convex path, each convex path having a curvature with increased~~decreased~~ radii of curvature adjacent an inner end and ~~decreased~~increased radii of curvature adjacent an outer end; and

forming the plastic material into at least 16,000 adhesion elements with flared ends per cm^2 accomplishing adhesion predominantly by van-der-Waals forces at the inner ends of the mold cavities, the flared ends forming heads with slightly convex end surfaces, the adhesion elements having stem parts with ends being formed at the outer ends of the mold cavities and being opposite the flared ends, with a height from 50 μm to 150 μm and with a diameter from 10 μm to 40 μm , the flared ends having a diameter from 15 μm to 70 μm .

23-25. (cancelled)

26. (previously presented) A process according to claim 22 wherein the shaping element is a drum-shaped screen having at least 16,000 mold cavities per cm^2 .

27. (cancelled)

28. (previously presented) A process according to claim 26 wherein each of the mold cavities has a hyperboloid shape.

29. (cancelled)

30. (previously presented) A process according to claim 22 wherein the contact angle is greater than 70 degrees.

31. (cancelled)

32. (previously presented) A process according to claim 22 wherein the height of the stems is approximately 90 μm ;
the diameter of the stems is approximately 30 μm ; and
the diameter of the flared end is approximately 50 μm .

33. (previously presented) A process according to claim 22 wherein the plastic material is cross-linked with or after molding of the adhesion elements.

34. (currently amended) A process for producing adhesion elements on a substrate, comprising the steps of:

introducing thixotropic plastic material of polyvinyl siloxane having a contact angle greater than 60 degrees due to surface energy for wetting with water into mold cavities in at least one shaping element, each of the mold cavities having a circumferential boundary wall extending

in a lengthwise direction thereof continuously along a convex path, each convex path having a curvature with ~~increased~~decreased radii of curvature adjacent an inner end and ~~decreased~~increased radii of curvature adjacent an outer end; and

forming the plastic material into at least 16,000 adhesion elements with flared ends per cm^2 accomplishing adhesion predominantly by van-der-Waals forces at the inner ends of the mold cavities, the flared ends forming heads with end surfaces having a concavity, the adhesion elements having stem parts with ends being formed at the outer ends of the mold cavities and being opposite the flared ends, with a height from 50 μm to 150 μm and with a diameter from 10 μm to 40 μm , the flared ends having a diameter from 15 μm to 70 μm .

35-37. (cancelled)

38. (previously presented) A process according to claim 34 wherein the shaping element is a drum-shaped screen having at least 16,000 mold cavities per cm^2 .

39. (cancelled)

40. (previously presented) A process according to claim 38 wherein each of the mold cavities has a hyperboloid shape.

41. (cancelled)

42. (previously presented) A process according to claim 34 wherein
the contact angle is greater than 70 degrees.

43. (cancelled)

44. (previously presented) A process according to claim 34 wherein
the height of the stems is approximately 90 μm ;
the diameter of the stems is approximately 30 μm ; and
the diameter of the flared end is approximately 50 μm .

45. (previously presented) A process according to claim 34 wherein
the plastic material is cross-linked with or after molding of the adhesion elements.

46. (currently presented) A process according to claim 10 wherein
the curvature with the increased~~decreased~~ radii of curvature has a beginning closer to the
inner end than the outer end.

47. (previously presented) A process according to claim 46 wherein
the beginning is at a one-third length portion of a curvature length.

48. (currently amended) A process according to claim 22 wherein
the curvature with the increased~~decreased~~ radii of curvature has a beginning closer to the
inner end than the outer end.

49. (previously presented) A process according to claim 48 wherein

the beginning is at a one-third length portion of a curvature length.

50. (currently amended) A process according to claim 34 wherein

the curvature with the ~~increased~~decreased radii of curvature has a beginning closer to the inner end than the outer end.

51. (previously presented) A process according to claim 50 wherein

the beginning is at a one-third length portion of a curvature length.